



Docket No. 95-004M  
PATENT APPLICATION

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2/20/03

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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Conrad O. Gardner      Group Art Unit: 3618  
Application No.: 08/896,514      Examiner: A. Lerner  
Filing Date: June 23, 1997      Docket No.: 95-004M  
Date: Feb. 20, 2003

For: Extended Range Motor Vehicle Having Ambient Pollution Processing

Attention: Board of Patent Appeals and Interferences  
Assistant Commissioner for Patents  
Washington, DC 20231

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**GROUP 3600**

Sir:

Responsive to the Office Letter dated December 3, 2002, applicant hereby requests reinstatement of the appeal and files this SECOND SUPPLEMENTAL BRIEF ON APPEAL.

Applicant files this SECOND SUPPLEMENTAL BRIEF ON APPEAL in triplicate within the three-month period for response.

### I. STATUS OF CLAIMS

1. Claims 30-41 and 46-61 are pending.
2. Claims 30-33 are allowed.
3. Claims 34-37, 40, 41, 46-51 and 53-61 are rejected.
4. Claims 38, 39 and 52 are objected to.
5. Claims 38, 39, 49, 52, and 53 contain allowable subject matter.

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Claim Objections

Objections 1, 2, and 3 relate to typographical errors resulting from numerous drafts of the set of claims on appeal typed and retyped in this case. Notice of these is appreciated, and the present set of "CLAIMS ON APPEAL" (Appendix A) attached is believed correct.

Claim Rejections – 35 U.S.C. 112

**Claims 46-49, 53, 55, 57, 58, 59, 60, and 61 are stated to be indefinite within the meaning of 35 U.S.C. 112 (Paragraph 6 of the Office Letter)**

While claims 46-49 are stated as indefinite, paragraph 7 of the Office Letter commences with Claim 49.

Claim 49 (Paragraph 7 of the Office Letter)

"The period of torque transfer" is believed clear and definite as recited. Patent claim 46 specifies a first torque flow path to traction wheels and a second torque flow path to traction wheels and dependent claim 49 describes a logic control circuit for controlling the periods of transfer in the already defined first and second torque flow paths of the parent claims.

Claim 53 (Paragraph 8 of the Office Letter)

Claim 53 is believed drawn correctly. The limitation proposed in a matter of scope, the suggested limitation to 4-wheel drive, is therefore deemed unnecessary.

Claim 55 (Paragraph 9 of the Office Letter)

It is suggested that there is no antecedent basis for "the throttle pedal" in line 6.

Section 2173.05(c) Lack of antecedent basis states "A claim is indefinite when it contains words or phrases whose meaning is unclear."

It is believed that "the throttle pedal" is a term that is not unclear. Also, "If the scope of a claim would be reasonably ascertainable by those skilled in the art, then the claim is not indefinite." *Ex parte Porter*, 25 U.S.P.Q. 2d 1144, 1145 (Bd. Pat.App. and Inter. 1992).

Claims 55 and 57 (Paragraphs 10, 11, and 12 of the Office Letter)

Insufficient antecedent basis fails for the same reasons given with respect to claim 55 above.

Claim 58 (Paragraph 13 of the Office Letter)

The limitation “utilizing an internal combustion engine having a horsepower approximately 20 to 30 percent of the horsepower of an equivalent weight internal combustion only powered vehicle” is believed clear and the metes and bounds of the claim are clearly ascertainable.

Claim 58 describes a hybrid motor vehicle having an electric motor and an internal combustion engine and it is the horsepower of a hybrid vs. an internal combustion only powered vehicle that is being compared and not two different internal combustion only powered vehicles as the Examiner states which is being compared.

Claims 59, 60 and 46 and 61 (Paragraphs 14-16 of the Office Letter)

The terms referenced, “the method”, “the cruise mode” and “traction wheels or drive wheels” are not believed indefinite for the same reasons given above with respect to claim 55.

Claims 34-37, 50, 54, and 57-61 stand rejected under 35 U.S.C. 102 (b)  
over Ellers (Paragraph 18 of the Office Letter)

Claim 34

Claim 34 is not anticipated under 35 U.S.C. 102 over Ellers ('025).

The cruise mode control circuit of claim 34 recites “deactivating said first coupling means driving a cruise mode off condition, and said control circuit activating second coupling means for connecting said combustion engine to an electric generator for charging a battery during the cruise mode off condition.” Nothing in Ellers is concerned with this operations parameter of a control circuit. As a consequence, dependent claims 35 and 36 are clearly not anticipated over Ellers.

Claim 37

Claim 37 is clearly not anticipated by Ellers.

“Control means for controlling whether to transfer a driving force generated by an engine to a power generator or wheels... (line 12 on).” This recitation is a feature of no concern to Ellers.

Claim 50

Nothing seen in Ellers which discloses “said cruise mode occurring when rapidly shifting power and speed demands are not occurring for predetermined periods of time (lines 4-5).”

Claim 54

Claim 54 is clearly not anticipated within the meaning of 35 U.S.C. 102, see lines 5-8 “said cruise mode logic circuit responsive to a plurality of vehicle operating parameters including vehicle speed and accelerator pedal information for providing cruise mode logic output control signals for controlling operation of said electric motor and said combustion engine.”

Claim 57

The method of operation defined by claim 57 “utilizing the electric motor primarily when conditions for said cruise mode conditions are not satisfied, the cruise mode occurring when rapidly shifting power and speed demands are not occurring” is not shown in Ellers.

Claim 58

Ellers fails to show the method steps claimed including “utilizing an internal combustion having a horsepower approximately 20 to 30 percent of an equivalent weight internal combustion only powered vehicle; and,

“operating said internal combustion engine at relatively constant speed and load demands in the cruise mode.”

Claim 59

Nothing is seen in Ellers relating to the method, viz. “causing a fast charge – discharge battery to power the electric motor on throttle demand and transferring power output into electric power conserved in a fast charge-discharge battery when the internal combustion engine continues to run.

Claim 60

The method called out in claim 60 defining operation in the cruise mode, viz. "controlling the operation of the electric motor and combustion engine in response to vehicle operating parameters", is not seen in Ellers.

Claim 61

In claim 61, the following feature in lines 10-15 are not seen in Ellers, Viz. "means for coupling said power transfer means for transferring an output power of said electric motor from the output shaft thereof to drive wheels of the hybrid vehicle upon starting the hybrid vehicle; means for uncoupling said power transfer means for transferring an output power of said engine from the output shaft thereof the drive wheels of the hybrid vehicle upon starting the hybrid vehicle;"

**Claims 37, 40, 46, 47, 55, and 61 stand rejected under 35 U.S.C. 102(b)  
over Kenyon ('342) paragraph 19 of the Office Letter**

Claim 37

The controller for a hybrid vehicle is defined in claim 37 claims "a control means for controlling whether to transfer a driving force generated by an engine to power a generator or wheels in accordance with a vehicle running state, wherein the control means transfers the driving force generated by; the engine to wheels when said running state is more than a predetermined value, transfers the driving force generated by the engine to the power generator when said running state is less than a predetermined value." No such controller is seen in Kenyon.

Claim 40

Claim 40 is dependent from claim 37 and not anticipated for the same reasons as claim 37.

Claim 46

The logic control circuit of claim 46 is not seen in Kenyon.

Claim 47

Dependent claim 47 is dependent from claim 46 and not anticipated at least for the same reasons as claim 46.

Claim 55

The method of claim 55 including step a. viz. "rapidly capturing power from a continuously running low horsepower internal combustion engine to charge a fast charge-discharge battery without loss of said power" is not seen in Kenyon.

Claim 61

In claim 61, "means for coupling said power transfer means for transferring an output power of said electric motor from the output shaft thereof to drive wheels of the hybrid vehicle upon starting the hybrid vehicle, means for uncoupling said power transfer means for transferring an output power of said engine from the output shaft thereof to drive wheels of the hybrid vehicle upon starting the hybrid vehicle" is not seen in Kenyon.

**Claims 37, 40, 50, 51, 54, 55, and 57-60 stand rejected over Lynch et al. ('795)  
under 35 U.S.C. 102(b)**

Claim 37

The control means of claim 37 is not shown in Lynch et al., viz. "control means for controlling whether to transfer a driving force generated by an engine to a power generator or wheels in accordance with a vehicle running state, wherein the control means transfers the driving force generated by the engine to wheels when said running state is more than a predetermined value, transfers the driving force generated by the engine to the power generator when said running state is less than a predetermined value." Therefore, the rejection of claim 37 under 35 U.S.C. 102(b) is incorrect.

Claim 40

Claim 40 is dependent from claim 37 and allowable for the same reasons as claim 40.

Claim 50

Nothing is seen in Lynch et al. to anticipate the limitation in claim 50, viz. "said cruise mode occurring when rapidly shifting power and speed demands are not occurring for predetermined periods of time" and therefore Lynch et al. is not anticipatory of claim 50.

Claim 51

The feature in claim 51, viz. "said engine powering said vehicle at higher speeds; and said engine operatively connected through a charging path for charging said battery at lower speeds" is not seen in Lynch et al.

Claim 54

The cruise mode logic control circuit of claim 54, viz. "said cruise mode by logic control circuit responsive to a plurality of vehicle operating parameters including vehicle speed and accelerator pedal information for providing cruise mode logic output control signals for controlling operation of said electric motor and said combustion engine" is not anticipated by Lynch et al. under 35 U.S.C. 102(b).

Claim 55

The method step (a) of method claim 55, viz. "by rapidly capturing power from a continuously running low horsepower internal combustion engine to charge a fast charge-discharge battery without loss of said power, and..." is not shown in Lynch et al.

Claim 57

"Utilizing the electric motor power primarily when conditions for said cruise mode conditions are not satisfied, the cruise mode occurring when rapidly shifting power and speed demands are not occurring" is a feature not anticipated by Lynch et al. under 35 U.S.C. 102(b).

Claim 58

The method of claim 58 including the step of "a. utilizing an internal combustion engine having a horsepower approximately 20 to 30 percent of the horsepower of an equivalent weight internal combustion only powered vehicle;" is not disclosed in Lynch et al.

Claim 59

Steps a. and b. in the method of claim 59 are not seen in Lynch et al., which is therefore not anticipatory.

Claim 60

“Controlling operation of the hybrid vehicle said cruise mode including controlling the operation of the electric motor and internal combustion engine in response to vehicle operating parameters is not seen in Lynch et al.

Claim 41 stand rejected over Ellers under 35 U.S.C. 103(a)  
(Paragraph 22 of the Office Letter)

Claim 41 is dependent from claim 40 which is dependent from claim 37. The system of Ellers is entirely deficient in satisfying energy storage in contrast to the claimed system. Claim 37 clearly distinguishes a control system neither seen, taught or suggested by Ellers. See the last paragraph on page 5 of the affidavit of Philip Malte of record titled, *Appendix C* included in applicant’s BRIEF ON APPEAL, copy attached.

Claim 56 stands rejected over Lynch et al. under 35 U.S.C. 103  
(Paragraph 23 of the Office Letter)

Lynch et al. describes a motor-generator operating as a load leveler where “the batteries are only required to furnish tractive power to the drive system for short periods of time (col. 2, lines 24-27). Increase in engine RPM causes the internal combustion engine of Lynch et al. to operate a motor-generator as a generator to charge storage batteries 14 (see col. 8, lines 60-66) in contrast to clause b. of claim 56 where a fast charge-discharge battery is charged when the internal combustion engine is “not employed to drive the motor vehicle.” Claim 56 calls for a system neither taught, suggested or made obvious by the system of Lynch et al. within the meaning of 35 U.S.C. 103(a). It should be further noted that for purposes of the load level concept design of Lynch et al., “standard automotive starting batteries with a large number of thin plates” are utilized (see col. 5, lines 18-20).

**Claim 48 stands rejected over Kenyon in view of Ellers under 35 U.S.C. 103(a)**  
**(Paragraph 24 of the Office Letter)**

Claim 48 is dependent from claim 46. Kenyon fails to show "a logic control circuit for interrupting torque flow path without interrupting torque flow in said first torque flow path without interrupting operation of said engine during disengagement of said clutch and application of torque through said second torque flow path to the traction wheels of the hybrid vehicle.

The feature of Ellers concerns low battery operation as a series hybrid and it is not understood how this teaching could be applied to the parallel hybrid system of Kenyon, and thus obvious to one of ordinary skill in the art within the meaning of 35 U.S.C. 103. Further, claim 48 relates to the condition of an inoperable electric motor, not low battery determination as Ellers system operation.

**Conclusion**

The Examiner's critique of this application is appreciated, however, no new prior art references have been cited and it is believed the claims on appeal in Appendix A are clear, definite, and clearly distinguish patentably over the prior art for the reasons given herein. As a consequence, it is believed the Examiner, upon careful review, will find the application in condition for allowance thereby avoiding further unnecessary proceedings before the Board of Appeals.

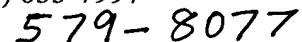
Respectfully submitted,



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